

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 (Currently Amended). A membrane binding diastereomeric peptide comprising from about 7 to 50 amino acid residues corresponding to an amino acid sequence of a fragment of a transmembrane protein, wherein at least two amino acid residues of the diastereomeric peptide are in the D-isomer configuration, said diastereomeric peptide capable of binding the transmembrane protein thereby inhibiting functional assembly of said transmembrane protein, and diastereomeric active fragments, derivatives, analogs or salts thereof.

2 (Original). The diastereomeric peptide according to claim 1 comprising from 10 to 40 amino acid residues.

3 (Previously Presented). The diastereomeric peptide according to claim 1, wherein the transmembrane protein is selected from the group consisting of viral proteins, bacterial proteins, ion channels, receptors, transporters, and pumps.

4 (Withdrawn). The diastereomeric peptide according to claim 3, wherein the viral protein is a viral envelope surface glycoprotein.

5 (Withdrawn). The diastereomeric peptide according to claim 4, wherein the viral envelope surface glycoprotein is selected from the group consisting of envelope surface glycoproteins of HIV, human T-lymphocyte virus, human respiratory syncytial virus, human parainfluenza virus, influenza virus, measles virus, Epstein-Barr virus, bovine leucosis virus, feline sarcoma virus, feline leukemia virus, simian sarcoma virus, simian leukemia virus, simian immunodeficiency virus, canine distemper virus, Newcastle disease virus, simian Mason-Pfizer virus, and sheep progressive pneumonia virus.

6 (Withdrawn). The diastereomeric peptide according to claim 5, wherein the viral envelope surface glycoprotein is HIV-1_{LAV1} gp41.

7 (Withdrawn). The diastereomeric peptide according to claim 6 comprising the amino acid sequence of DP178 set forth in SEQ ID NO:1.

8 (Withdrawn). The diastereomeric peptide according to claim 7 selected from the group consisting of SEQ ID NO:2 and SEQ ID NO:3.

9 (Withdrawn). The diastereomeric peptide according to claim 7, further comprising at least one positively charged amino acid residue at the amino terminus, carboxy terminus, or both.

10 (Withdrawn). The diastereomeric peptide according to claim 6 comprising the amino acid sequence set forth in SEQ ID NO:4 corresponding to HIV-1_{LAV1} gp41 amino terminal fusion peptide.

11 (Withdrawn). The diastereomeric peptide according to claim 10 selected from the group consisting of SEQ ID NO:5 to SEQ ID NO:7.

12 (Withdrawn). The diastereomeric peptide according to claim 10, further comprising at least one positively charged amino acid residue at the amino terminus, carboxy terminus, or both.

13 (Withdrawn). The diastereomeric peptide according to claim 1, wherein the membrane protein is Glycophorin A.

14 (Withdrawn). The diastereomeric peptide according to claim 13 comprising the amino acid sequence set forth in SEQ ID NO: 8.

15 (Withdrawn). The diastereomeric peptide according to claim 14, further comprising at least one

positively charged amino acid residue at the amino terminus, carboxy terminus, or both.

16 (Withdrawn). The diastereomeric peptide according to claim 15 selected from the group consisting of SEQ ID NO:9 and SEQ ID NO:10.

17 (Withdrawn). The diastereomeric peptide according to claim 14 selected from the group consisting of SEQ ID NO:11 to SEQ ID NO:19.

18 (Original). The diastereomeric peptide according to claim 3, wherein the bacterial protein is aspartate Tar receptor.

19 (Original). The diastereomeric peptide according to claim 18 comprising the amino acid sequence set forth in SEQ ID NO:20 corresponding to the transmembrane-1 domain of the aspartate Tar receptor.

20 (Original). The diastereomeric peptide according to claim 19, further comprising at least one positively charged amino acid at the amino terminus, carboxy terminus, or both.

21 (Previously Presented). The diastereomeric peptide according to claims 19 selected from the group consisting of SEQ ID NO:22 and SEQ ID NO:23.

22 (Previously Presented). A pharmaceutical composition comprising as an active ingredient a membrane binding diastereomeric peptide according to claim 1 and a pharmaceutically acceptable carrier.

23-42 (Cancelled).

43 (Withdrawn). A method for inhibiting membrane protein assembly in a cell comprising contacting the cell with an effective amount of a membrane binding diastereomeric peptide according to claim 1, thereby inhibiting the membrane protein assembly.

44 (Withdrawn). A method for inhibiting infection by a virus to a cell comprising contacting the cell with an effective amount of a membrane binding diastereomeric peptide according to claim 1, thereby inhibiting the infection of the cell.

45 (Withdrawn). The method according to claim 44, wherein the virus is selected from HIV, human T-lymphocyte virus, human respiratory syncytial virus, human parainfluenza virus, influenza virus, measles virus, Epstein-Barr virus, bovine leucosis virus, feline sarcoma virus, feline leukemia virus, simian sarcoma virus, simian leukemia virus, simian immunodeficiency virus, canine distemper virus, Newcastle

disease virus, simian Mason-Pfizer virus, and sheep progressive pneumonia virus.

46 (Withdrawn). A method for inhibiting chemotaxis of a bacterial cell to a nutrient comprising contacting the cell with an effective amount of a membrane binding diastereomeric peptide according to claim 1, thereby inhibiting the chemotaxis of the bacterial cell to the nutrient.

47 (Withdrawn). A method for inhibiting virus replication or transmission in a subject comprising administering to the subject in need thereof a therapeutically effective amount of a pharmaceutical composition according to claim 22, thereby inhibiting the virus replication or transmission.

48 (Withdrawn). The method according to claim 47, wherein the subject is a human.

49 (Withdrawn). The method according to claim 48, wherein the virus is a human virus selected from the group consisting of HIV, human T-lymphocyte virus, human respiratory syncytial virus, human parainfluenza virus, influenza virus, measles virus, Epstein-Barr virus, and Hepatitis B virus.

50 (Withdrawn). The method according to claim 47, wherein the subject is an animal.

Appln. No. 10/583,996
Reply dated February 17, 2009
Reply to Office Action of July 2, 2008

51 (Withdrawn). The method according to claim 50, wherein the virus is selected from the group consisting of bovine leucosis virus, feline sarcoma virus, feline leukemia virus, simian sarcoma virus, simian leukemia virus, simian immunodeficiency virus, canine distemper virus, Newcastle disease virus, simian Mason-Pfizer virus, and sheep progressive pneumonia virus.